AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

1. (Currently Amended) A computer program product, tangibly embodied in a machine readable storage device, the computer program product comprising instructions operable to cause data processing apparatus to perform operations comprising:

receiving a plurality of process data items associated with a plurality of process instances that are executed using a plurality of components operating in a distributed computer system, each process data item comprising a plurality of application data and having been collected by each agent of a plurality of agents, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, ~~and wherein the agents include a first set of agents associated with less than all of the components of the first set of components and a second set of agents associated with less than all of the components of the second set of components~~ a first agent collecting a first process data item of a first type corresponding to a first attribute and a second attribute, and a second agent collecting a second process data item of a second type corresponding to the first attribute and the second attribute, the first type being different from the second type;

comparing in accordance with a plurality of predefined rules each received process data item with one or more other received process data items to identify process data corresponding to process instances executed on the distributed computer system, the predefined rules comprising:

identifying the first and second process data items as belonging to a common process instance when a value of the first attribute is equal for both the first and second process data items,

identifying the first and second process data items as belonging to a common process instance when values of the first and second attributes are equal for both the first and second process data items, and

identifying the first process data item and a third process data item collected by a third agent as belonging to a common process instance when the first and second process data items belong to a common process instance and the second and third process data items belong to a common process instance;

grouping into a first group a plurality of process data items corresponding to the first process instance, the first process instance being a single execution of a first sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items corresponding to the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing the first and second process instances based on the process data items in the first and second groups, respectively.

2. (Original) The computer program product of claim 1, wherein the operations further comprise:

modeling a process based on the reconstruction of the first process instance.

3.-9. (Cancelled)

10. (Currently Amended) A computer program product, tangibly embodied in machine readable storage device, the computer program product comprising instructions operable to cause data processing apparatus to perform operations comprising:

receiving a specification of a predetermined condition;

upon the occurrence of the predetermined condition, using agents to collect a plurality of process data items associated with a plurality of components operating in a distributed computer

system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, ~~and wherein the agents include a first set of agents associated with less than all of the components of the first set of components and a second set of agents associated with less than all of the components of the second set of components~~ a first agent collecting a first process data item of a first type corresponding to a first attribute and a second attribute, and a second agent collecting a second process data item of a second type corresponding to the first attribute and the second attribute, the first type being different from the second type; and

transferring the process data items to a central system operable to discover and reconstruct the first and second process instances based on common application data found in the process data items, the first and second process instances each being a single execution of a sequence of related steps carried out in the distributed computer system, the discovering comprising:

identifying the first and second process data items as belonging to a common process instance when a value of the first attribute is equal for both the first and second process data items,

identifying the first and second process data items as belonging to a common process instance when values of the first and second attributes are equal for both the first and second process data items, and

identifying the first process data item and a third process data item collected by a third agent as belonging to a common process instance when the first and second process data items belong to a common process instance and the second and third process data items belong to a common process instance.

11. (Currently Amended) The computer program product of claim 10, wherein the operation of collecting the process data items occurs without modifying components of the plurality of components ~~the component~~.

12. (Currently Amended) The computer program product of claim 10, wherein the operations further comprise:

receiving a specification of a second predetermined condition; and

upon the occurrence of the second predetermined condition, collecting additional process data items associated with a ~~the~~ component.

13. (Original) The computer program product of claim 10, wherein the operations further comprise:

receiving a specification of a second component;

upon the occurrence of another predetermined condition, collecting other process data items associated with the second component; and

transferring the other process data items to the central system.

14. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

collecting a plurality of process data items associated with a plurality of components operating in a distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, ~~and wherein the agents include a first set of agents associated with less than all of the components of the first set of components and a second set of agents associated with less than all of the components of the second set of components~~ a first agent collecting a first process data item of a first type corresponding to a first attribute and a second attribute, and a second agent collecting a second process data item of a second type corresponding to the first attribute and the second attribute, the first type being different from the second type;

transferring the process data items from the agents to a central system;

comparing in accordance with a plurality of predefined rules each transferred process data item with one or more other transferred process data items to identify process data corresponding to process instances executed on the distributed computer system, the predefined rules comprising:

identifying the first and second process data items as belonging to a common process instance when a value of the first attribute is equal for both the first and second process data items,

identifying the first and second process data items as belonging to a common process instance when values of the first and second attributes are equal for both the first and second process data items, and

identifying the first process data item and a third process data item collected by a third agent as belonging to a common process instance when the first and second process data items belong to a common process instance and the second and third process data items belong to a common process instance;

grouping into a first group in the central system a plurality of process data items corresponding to the first process instance, the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items corresponding to the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing the first and second process instances based on the process data items in the first and second groups, respectively.

15. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

receiving a plurality of process data items associated with a plurality of components

operating in a distributed computer system, each process data item comprising application data and having been collected by agents, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, ~~and wherein the agents include a first set of agents associated with less than all of the components of the first set of components and a second set of agents associated with less than all of the components of the second set of components~~ a first agent collecting a first process data item of a first type corresponding to a first attribute and a second attribute, and a second agent collecting a second process data item of a second type corresponding to the first attribute and the second attribute, the first type being different from the second type;

comparing in accordance with a plurality of predefined rules each received process data item with one or more other received process data items to identify common application data, the predefined rules comprising:

identifying the first and second process data items as belonging to a common process instance when a value of the first attribute is equal for both the first and second process data items,

identifying the first and second process data items as belonging to a common process instance when values of the first and second attributes are equal for both the first and second process data items, and

identifying the first process data item and a third process data item collected by a third agent as belonging to a common process instance when the first and second process data items belong to a common process instance and the second and third process data items belong to a common process instance;

grouping into a first group a plurality of process data items having common application data that corresponds to the first process instance, the first process instance being a single execution of a sequence of related steps carried out in the distributed computer system;

grouping into a second group a plurality of process data items having common application data that corresponds to the second process instance, the second process instance being a single execution of a second sequence of related steps carried out in the distributed computer system; and

reconstructing the first and second process instances based on the process data items in the first and second groups, respectively.

16. (Original) The method of claim 15, wherein the method further comprises:

modeling a process based on the reconstruction of the first process instance.

17. (Previously Presented) The method of claim 15, wherein the method further comprises:

monitoring the first process instance based on the process data items in the first group.

18. (Currently Amended) A method of monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the method comprising:

executing one or more process instances on a distributed computer system comprising a plurality of computers;

receiving a specification of a predetermined condition;

upon the occurrence of the predetermined condition, using agents to collect a plurality of process data items associated with components operating in the ~~a~~ distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, ~~and wherein the agents include a first set of agents associated with less than all of the components of the first set of components and a second set of agents associated with less than all of the components of the second set of components~~ a first agent collecting a first process data item of a first type corresponding to a first attribute and a second attribute, and a second

agent collecting a second process data item of a second type corresponding to the first attribute and the second attribute, the first type being different from the second type; and

transferring the process data items to a central system operable to discover and reconstruct the first and second process instances based on common application data found in the process data items, the first and second process instances each being a single execution of a sequence of related steps carried out in the distributed computer system, the discovering comprising:

identifying the first and second process data items as belonging to a common process instance when a value of the first attribute is equal for both the first and second process data items,

identifying the first and second process data items as belonging to a common process instance when values of the first and second attributes are equal for both the first and second process data items, and

identifying the first process data item and a third process data item collected by a third agent as belonging to a common process instance when the first and second process data items belong to a common process instance and the second and third process data items belong to a common process instance.

19.-21. (Cancelled)

22. (Previously Presented) A system for monitoring an autonomous sequence of related steps, executed using a plurality of components operating in a distributed computer system specifying a process, the system comprising:

a plurality of computers that communicate with one another over one or more communications channels to define a distributed computer system;

means for receiving a specification of a predetermined condition at one or more computers of the plurality of computers;

agents for, upon the occurrence of the predetermined condition, collecting a plurality of

process data items associated with a plurality of components operating in the ~~a~~ distributed computer system, wherein the plurality of components includes a first set of components that execute a first process instance and a second set of components that execute a second process instance with at least one of the plurality of components included in each of the first and second sets of components, ~~and wherein the agents include a first set of agents associated with less than all of the components of the first set of components and a second set of agents associated with less than all of the components of the second set of components~~ a first agent collecting a first process data item of a first type corresponding to a first attribute and a second attribute, and a second agent collecting a second process data item of a second type corresponding to the first attribute and the second attribute, the first type being different from the second type; and

means for transferring the process data items to a central system operable to discover and reconstruct the first and second process instances based on common application data found in the process data items, the first and second process instances each being a single execution of a sequence of related steps carried out in the distributed computer system, the discovering comprising:

identifying the first and second process data items as belonging to a common process instance when a value of the first attribute is equal for both the first and second process data items,

identifying the first and second process data items as belonging to a common process instance when values of the first and second attributes are equal for both the first and second process data items, and

identifying the first process data item and a third process data item collected by a third agent as belonging to a common process instance when the first and second process data items belong to a common process instance and the second and third process data items belong to a common process instance.

23.-26. (Cancelled)

27. (Previously Presented) The computer program product of claim 1, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

28. (Previously Presented) The computer program product of claim 10, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

29. (Previously Presented) The method of claim 14, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

30. (Previously Presented) The method of claim 15, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

31. (Previously Presented) The method of claim 18, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

32. (Cancelled)

33. (Previously Presented) The system of claim 22, wherein the plurality of process data items includes a first type of process data item and a different, second type of process data item that are each collected by a common agent upon occurrence of a common predetermined condition.

34. (Previously Presented) The computer program product of claim 1, wherein the operations further comprise:

identifying a tracking point associated with a component of the first set of components; and

associating an agent of the first set of agents with the component.

35. (New) The computer program product of claim 1, wherein the operations further comprise assigning an identifier to each agent, the identifier being unique within the distributed computer system.

36. (New) The computer program product of claim 35, wherein the unique identifier enables a central system of the distributed computer system to locate and communicate with a particular agent.

37. (New) The computer program product of claim 1, wherein the operations further comprise associating an agent with an interface point of a component, the interface point being used for component communication within the distributed system.